

## ABSTRACT OF THE DISCLOSURE

A communication system performs WDM optical communications efficiently with variably set supervisory control channels. The communication system includes a supervisory control channel setting unit for variably setting supervisory control channels for supervising optical communications, said supervisory control channels including a first optical supervisory channel whose transmission band falls outside of the transmission band for main optical signals, and a second supervisory channel whose transmission band falls in an idle band in the transmission band for said main optical signals. The communication system also has a WDM transmitting unit for wavelength-multiplexing and -demultiplexing said supervisory control channels and said main optical signals. A setting information indicating unit indicates, to a WDM device, setting information for setting the supervisory control channels. An operating state managing unit manages a network operating state.

10

15

20